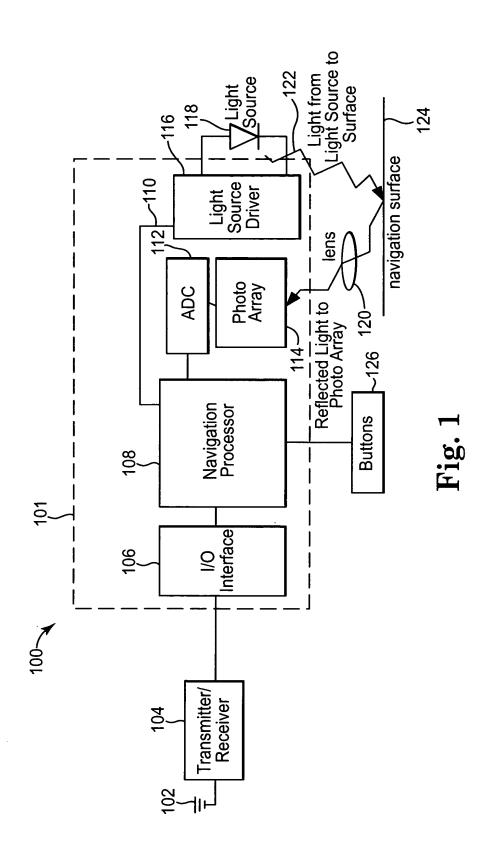APPLICANT: GARY B. GORDON ET AL.
DOCKET NO.: 10040442-1
TITLE: APPARATUS FOR CONTROLLING THE POSITION OF A
SCREEN POINTER THAT WIRELESSLY TRANSMITS COMPRESSED
DATA

SHEET 1 OF 4

Fig. 1

APPLICANT: GARY B. GORDON ET AL.
DOCKET NO.: 10040442-1
TITLE: APPARATUS FOR CONTROLLING THE POSITION OF A
SCREEN POINTER THAT WIRELESSLY TRANSMITS COMPRESSED
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SHEET 2 OF 4

108

204

202

Processor

206

Input/Output
Interface

208

Memory

Delta-x — 210

Delta-y — 212

Buffer — 214

LUT — 216

R-theta — 218

Acceleration — 220

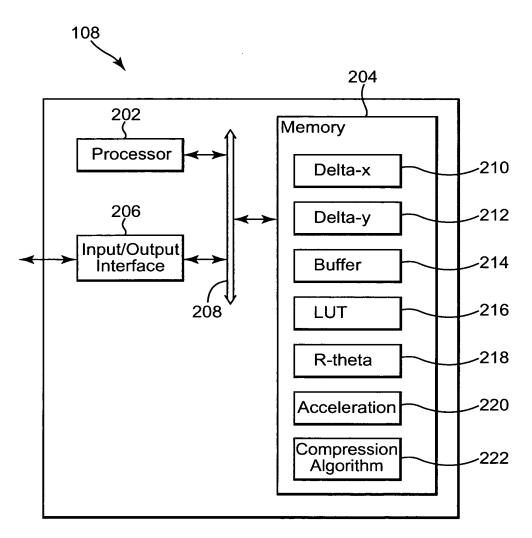Compression
Algorithm — 222

Fig. 2

APPLICANT: GARY B. GORDON ET AL.
DOCKET NO.: 10040442-1
TITLE: APPARATUS FOR CONTROLLING THE POSITION OF A
SCREEN POINTER THAT WIRELESSLY TRANSMITS COMPRESSED
DATA

SHEET 3 OF 4

300

```
┌─────────────────────────────┐
│       Retrieve delta-x      │──302
│        and delta-y          │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│  Calculate Adjusted delta-x │──304
│   and Adjusted delta-y      │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│    Identify $2^X$ values for │
│  the Adjusted delta-x and   │──306
│   Adjusted delta-y values   │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│     Calculate Residues      │──308
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│    Calculate Logarithms     │──310
│     of the $2^X$ values      │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│ Wirelessly Transmit Binary  │
│    Data Representing        │──312
│   Logarithm Results         │
└─────────────────────────────┘
```
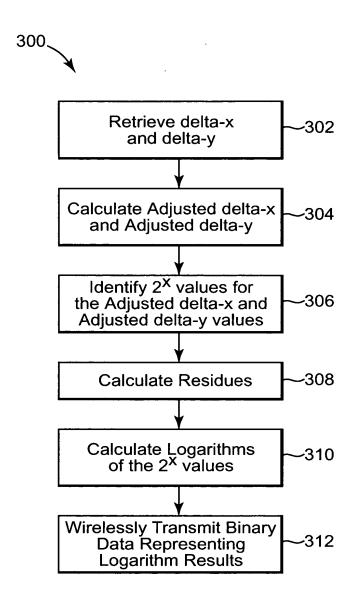
Fig. 3

APPLICANT: GARY B. GORDON ET AL.
DOCKET NO.: 10040442-1
TITLE: APPARATUS FOR CONTROLLING THE POSITION OF A
SCREEN POINTER THAT WIRELESSLY TRANSMITS COMPRESSED
DATA

SHEET 4 OF 4

Movement	Value in Buffer	Transmitted Value	Residue
14 (0000 1110)	14	$\log 16_2 = 4$ (0100)	-2
14 (0000 1110)	12	$\log 16_2 = 4$ (0100)	-4
14 (0000 1110)	10	$\log 8_2 = 3$ (0011)	+2
14 (0000 1110)	16	$\log 16_2 = 4$ (0100)	0

402   404   406   408

410A
410B
410C
410D

400

Fig. 4